

AMENDMENTS TO THE CLAIMS:

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1 1. (Currently Amended) A system comprising:
2 a controller that, when operably coupled to a light source emitting light at a
3 selectively variable output power, determines an output power for emitted light based upon
4 measurements of one or more of forward voltage and current across the light source, ambient
5 temperature around the light source, and a factor specific to mounting of the light source.

1 2. (Original) The system according to claim 1, wherein the forward voltage is employed
2 to determine a forward current through the light source, and wherein the output power is determined
3 based further upon the forward current.

1 3. (Original) The system according to claim 2, wherein the forward current is measured,
2 calculated or determined from a look-up table.

1 4. (Original) The system according to claim 1, wherein the forward voltage is employed
2 to determine a die temperature for the light source, and wherein the output power is determined
3 based further upon the die temperature.

1 5. (Original) The system according to claim 4, wherein the die temperature is calculated
2 or determined from a look-up table.

1 6. (Original) The system according to claim 1, wherein the output power is determined
2 without measurement of emitted light.

1 7. (Original) An optical subassembly including the system according to claim 1, the
2 optical subassembly further comprising the light source and adapted for transmission of data over
3 an optical transmission medium.

1 8. (Original) A computer including the optical subassembly according to claim 7, the
2 computer further comprising:
3 a processor coupled to the controller; and
4 a network connection through the optical subassembly to the optical transmission
5 medium.

1 9. (Currently Amended) A method comprising:
2 determining an output power for light emitted from a light source emitting light at a
3 selectively variable output power, wherein the determination of the output power is based upon
4 measurements of one or more of forward voltage and current across the light source, ambient
5 temperature around the light source, and a factor specific to mounting of the light source.

1 10. (Original) The method according to claim 9, further comprising:
2 employing the forward voltage to determine a forward current through the light
3 source; and
4 determining the output power based further upon the forward current.

1 11. (Original) The method according to claim 10, further comprising:
2 measuring the forward current;
3 calculating the forward current; or
4 determining the forward current from a look-up table.

1 12. (Original) The method according to claim 9, further comprising:
2 employing the forward voltage to determine a die temperature for the light source;
3 and
4 determining the output power based further upon the die temperature.

1 13. (Original) The method according to claim 12, further comprising:
2 calculating the die temperature; or
3 determining the die temperature from a look-up table.

1 14. (Original) The method according to claim 9, further comprising:
2 determining the output power without measurement of emitted light.

1 15. (Currently Amended) An optical subassembly comprising:
2 a light source emitting light at a selectively variable output power; and
3 a controller that, when operably coupled to the light source, determines an output
4 power for emitted light based upon measurements of one or more of forward voltage and current
5 across the light source, ambient temperature around the light source, and a factor specific to
6 mounting of the light source.

1 16. (Original) The optical subassembly according to claim 15, further comprising:
2 a temperature sensor proximate to the light source and coupled to the controller, the
3 temperature sensor providing measurements of the ambient temperature for use by the controller.

1 17. (Original) The optical subassembly according to claim 16, wherein the controller
2 further comprises:
3 a voltage detector providing measurements of the forward voltage to the controller.

1 18. (Original) The optical subassembly according to claim 17, wherein the forward
2 voltage is employed to determine one or both of a forward current through the light source and a die
3 temperature for the light source, and wherein the output power is determined based further upon one
4 or both of the forward current and the die temperature.

1 19. (Original) The optical subassembly according to claim 18, further comprising:
2 a memory communicably coupled to the controller, the memory containing one or
3 both of a look-up table for the forward current and a look-up table for the die temperature.

1 20. (Original) The optical subassembly according to claim 19, wherein the output power
2 is determined without measurement of emitted light emitted by the light source.